

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A stack, comprising:

an impermeable metal structure ~~configured to function as a collector layer or a bipolar plate,~~

at least one first metal fiber layer, said first metal fiber layer comprising first metal fibers, said first metal fibers having a polygonal cross section, and

at least one second metal fiber layer, said second metal fiber layer comprising second metal fibers, said second metal fibers having a polygonal cross section,

said first metal fiber layer having fibers with an equivalent diameter larger than $20 \mu\text{m}$ and being sintered to a first side of said impermeable metal structure,

said second metal fiber layer having fibers with an equivalent diameter smaller than $10 \mu\text{m}$ and being sintered to another side of said first metal fiber layer opposite to the impermeable metal structure,

wherein a planar air permeability of said stack is more than $0.02 \text{ l/min}^*\text{cm}$,

wherein said planar air permeability is an amount of gas which is passed through the metal fiber layers of the stack in a direction parallel to a plane of said metal fiber layers,
wherein the planar air permeability is measured by taking a rectangular part with a height of 2.5 cm of the stack, a side of said rectangular part with a height 2.5 cm being referred to as short side, the other side of said rectangular part being referred to as long side, with the rectangular part being clamped between two seals of equal dimension in such a way that the sides of said rectangular part and the sides of said seals coincide, wherein air is sucked using an underpressure of 200 Pa over a test length of 5 cm of the long side of said rectangular part, a non-used length of the long side is sealed, a volume of air which is sucked is measured and expressed in liters, and the planar air permeability is expressed in $1/\text{min}^*\text{cm}$ by dividing the volume of air by a measurement of time (in minutes) and by the test length of 5 cm along the long side,

wherein a porosity of said second metal fiber layer is less than 80%[[,]]

wherein ~~a porosity of said first metal fiber layer is more than 80%~~.

2. (Previously Presented) A stack as in claim 1, said stack further comprising another first metal fiber layer sintered to a second side of said impermeable metal structure and another second metal fiber layer sintered to the another first metal fiber layer on a side opposite to the impermeable metal structure.

3. (Canceled)

4. (Previously Presented) A stack as in claim 1, said second metal fiber layer having a perpendicular air permeability of less than 200 l/min*dm².

5. (Cancelled)

6. (Cancelled)

7. (Previously Presented) A stack as in claim 1, said first metal fiber layer having a thickness of more than 0.5mm.

8. (Previously Presented) A stack as in claim 1, said second metal fiber layer having a thickness of less than 0.2mm.

9. (Previously Presented) A stack as in claim 1, said stack having a transversal electric resistance less than 30×10^{-3} Ohm.

10. (Previously Presented) A stack as in claim 1, said impermeable metal structure being a metal plate.

11. (Previously Presented) A stack as in claim 1, said impermeable metal structure being a metal foil.

12. (Previously Presented) A stack as in claim 1, wherein metal fibers of the first and second metal fiber layers are stainless steel fibers.

13. (Previously Presented) A stack as in claim 1, wherein metal fibers of the first and second metal fiber layers are Ni-fibers or Ni alloy fibers.

14. (Previously Presented) A stack as in claim 1, wherein metal fibers of the first and second metal fiber layers are Ti-fibers.

15. (Previously Presented) A stack as in claim 1, wherein metal fibers of the first and second metal fiber layers are a same alloy of said impermeable metal structure.

16. (Previously Presented) A fuel cell, comprising a plurality of stacks as in claim 1.

17. (Previously Presented) An electrolyser, comprising a plurality of stacks as in claim 1.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) A stack as in claim 1, wherein the porosity of the first metal fiber layer is more than 10% greater than the porosity of the second metal fiber layer.

21. (Canceled)

22. (Canceled)

23. (Currently Amended) A stack as in claim 27 [[1]], wherein the porosity of said first metal fiber layer is more than 82%.

24. (Currently Amended) A stack as in claim 27 [[1]], wherein the porosity of said first metal fiber layer is more than 85%.

25. (Currently Amended) A stack as in claim 27 [[1]], wherein the porosity of said first metal fiber layer is more than 90%.

26. (Previously Presented) A stack as in claim 4, wherein the perpendicular air permeability is the amount of gas passing through the second metal fiber layer in a direction perpendicular to a plane of the second metal fiber layer.

27. (New) A stack as in claim 1, wherein a porosity of said first metal fiber layer is more than 80%.

28. (New) A stack as in claim 1, wherein the first metal fibers have an equivalent diameter larger than 20 μm .

29. (New) A stack as in claim 1, wherein the first metal fibers have an equivalent diameter less than 30 μm .

30. (New) A stack as in claim 1, wherein the second metal fibers have an equivalent diameter smaller than 10 μm .

31. (New) A stack as in claim 1, wherein the second metal fiber layer is in contact with a membrane.

32. (New) A stack as in claim 1, wherein the first metal fibers have an average length greater than 3 mm.

33. (New) A stack as in claim 1, wherein the second metal fibers have an average length greater than 3 mm.